

Amendments to the Claims:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously present), or (not entered).

Applicant reserves the right to pursue any cancelled claims at a later date.

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.-34. (canceled)

35. (previously presented) A layer system, comprising:

a substrate;

a porous layer on a surface of the substrate;

a plurality of pores in the porous layer; and

a plurality of pore walls delimiting the pores in the porous layer,

wherein the pore walls which adjoin the surface of the substrate have a larger cross-sectional area than the pore walls which do not adjoin the surface of the substrate, which results in an improved mechanical bonding of the pore walls to the substrate.

36. (currently amended) The layer system as claim in claim 35,

~~wherein a plurality of contact zones between the porous layer and the surface of the substrate are formed by a plurality of wall section surfaces wherein the pore walls of adjacent pores intersect at wall section surfaces,~~

wherein a size of the wall section surfaces at the surface of the substrate is larger than a size of the wall section surfaces which do not adjoin the surface of the substrate resulting in an improved mechanical bonding of the wall surface section to the substrate.

37. (previously presented) The layer system as claim in claim 35, wherein a contact surface between the pore walls or the wall section surfaces and the substrate is at least 10% of the surface of the substrate which is covered by the porous layer.

38. (previously presented) The layer system as claim in claim 35, wherein a thickness of the pore walls varies with a gradient along a radial direction perpendicular to the surface of the substrate and is greater in a vicinity of the surface of the substrate than in a vicinity of an outer surface of the porous layer.

39. (previously presented) The layer system as claim in claim 35, wherein a size of the pores varies with a gradient along a radial direction perpendicular to the surface of the substrate and is smaller in a vicinity of the surface of the substrate than in a vicinity of an outer surface of the porous layer.

40. (previously presented) The layer system as claim in claim 35, wherein edges of pore walls and passages in the pore walls through which a cooling medium flows are partially rounded.

41. (previously presented) The layer system as claim in claim 35, wherein the porous layer has a honeycomb structure.

42. (previously presented) The layer system as claim in claim 35, wherein a protective layer is applied within the porous layer in a region of an outer surface of the porous layer or is applied to the surface of the porous layer.

43. (previously presented) The layer system as claim in claim 42, wherein the protective layer is metallic or ceramic.

44. (previously presented) The layer system as claim in claim 35, wherein the porous layer is metallic or ceramic.

45. (currently amended) The layer system as claim in claim 35, wherein the layer system is applied on comprises a turbine component which is selected from the group consisting of: a turbine blade, a turbine vane, and a combustion chamber lining.

46. (previously presented) The layer system as claim in claim 35, wherein the substrate is an iron-base, nickel-base or cobalt-base superalloy.

47. (currently amended) The layer system as claim in claim 35, wherein the layer system comprises a medium having foreign particles which flows through the layer and a size of the pores in the porous layer is larger than a size of the foreign particles in a medium which flows through the layer.

48. (currently amended) A process for producing a layer system, comprising:
providing a substrate;
producing a porous layer on a surface of the substrate;
arranging a plurality of pores in the porous layer; and
delimiting the pores in the porous layer with a plurality of pore walls,
wherein the pore walls which adjoin the surface of the substrate have a larger cross-sectional area than the pore walls which do not adjoin the surface of the substrate,
wherein the porous layer comprises a plurality of layers and is produced in layers in a plurality of steps.

49. (previously presented) The process as claim in claim 48, wherein the porous layer is joined to the substrate by soldering or by laser stereolithography.

50. (previously presented) The process as claim in claim 48, wherein a plastic is applied to the substrate in layers as a negative form and is cured by a laser to form the pores in the porous layer which are surrounded with a material of the porous layer by casting to produce the porous layer,

51. (previously presented) The process as claim in claim 48, wherein a plastic model of the porous layer is produced and a casting mold for the porous layer is produced from the plastic model by duplicate molding, and the porous layer is produced using the casting mold.

52. (previously presented) The process as claim in claim 48, wherein a printing paste which contains a material of the porous layer is applied to the substrate in layers to produce the porous layer.

53. (currently amended) A process for producing a layer system, comprising:
providing a substrate;
producing a porous layer on a surface of the substrate;
arranging a plurality of pores in the porous layer; and
delimiting the pores in the porous layer with a plurality of pore walls,
wherein the pore walls which adjoin the surface of the substrate have a larger cross-sectional area than the pore walls which do not adjoin the surface of the substrate,
wherein the porous layer is produced together with the substrate in a single step.

54. (previously presented) The process as claim in claim 53, wherein the porous layer is produced together with the substrate by casting.